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imagery analysis report

SS-X-24 Missile Component Sizing (S)

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SS-X-24 MISSILE COMPONENT SIZING (S)

OVERVIEW

1. Analysis indicates that the SS-X-24 ICBM missile canister is about [] in diameter, the payload is about [] in diameter, and the airframe may be about [] in diameter. This information is derived from detailed analysis of probable SS-X-24 missile training components at the recently identified silo loading and [] at Plesetsk Missile and Space Test Center East Support Facility [] Figure 1). Historically, the Soviets have used payload and canister simulators for crew training. These components typically are observed first at test ranges and later at deployed complexes and are used during both silo loading exercises and [] and mating crew training exercises. In the past, the overall dimensions of these types of training components have been almost identical to those of the operational components they represent. To illustrate the similarity of training components for systems already deployed and those for the SS-X-24, the SS-X-24 training components are compared to those associated with the SS-18 Mod-2 ICBM. (TSR)

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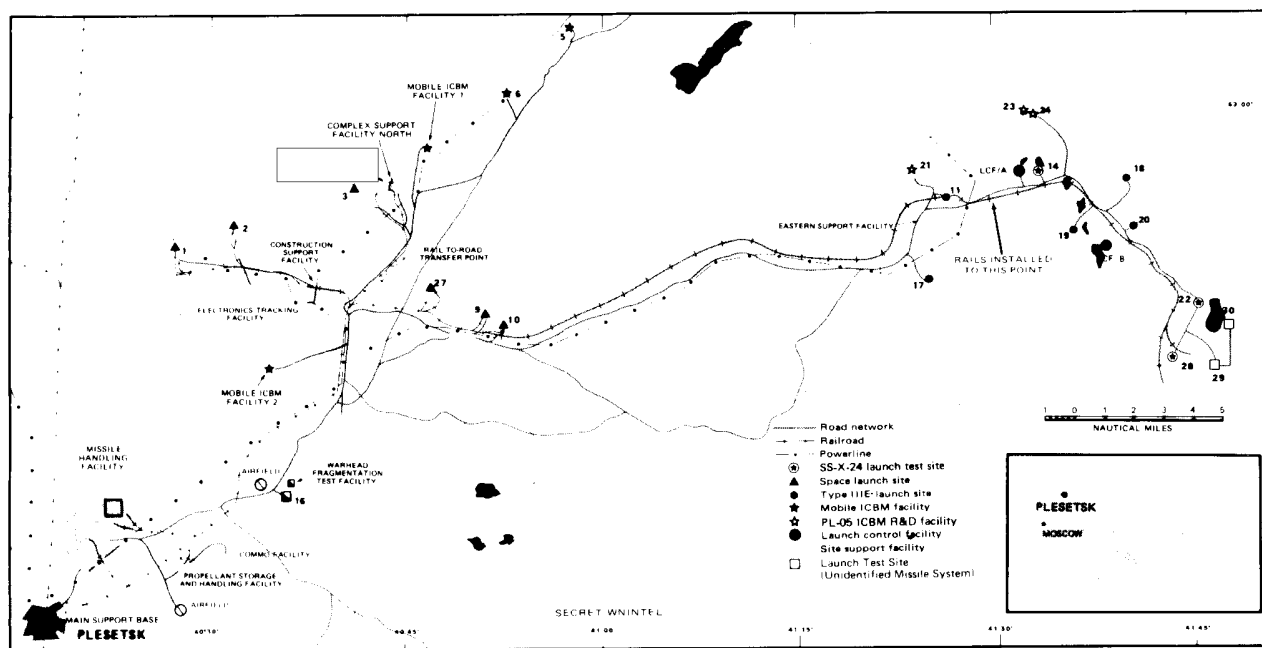
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DISCUSSION

2. Silo loading and [] areas have been recently identified in the separately secured SS-X-24 section of the Plesetsk East Support Facility (Figure 2). The silo loading training area, constructed between April 1984 and January 1985, contains a paved apron with a stub training silo and a high-bay, drive-through maintenance/support building. A probable canister extension load simulator was initially identified in this facility in April 1985. (TSR)

3. [] constructed between late 1983 and early 1984, is in a fenced area behind the 50-meter-deep, five-bay garage (Figure 3). This area also has a stub training silo and provides open storage of training components. Payload-related training components were first delivered to this facility in mid-1982, about the same time that a type IV warhead transporter—which at Plesetsk is associated only with the SS-X-24—was identified at the rangehead. However,

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FIGURE 1. LOCATION OF EAST SUPPORT FACILITY AT PLESETSK MSC

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because of poor image interpretability, these components were not identified until April 1985. Payload-related training components identified through [] include a probable payload simulator, a probable component shipping canister, and a probable payload-related crate. (TSR)

SS-X-24 Missile Canister Diameter

4. An SS-X-24 probable canister extension load simulator was at the silo loading training area on [] Figure 4). Its resemblance to the [] long SS-18 canister extension load simulator can be seen in the figure. The SS-X-24 probable canister extension simulator is about [] meters wide, which indicates that the SS-X-24 canister is about [] in diameter. (Image obliquity and shadows precluded determining the overall length of the probable load simulator, but it is at

least [] long.) It consists of two rounded end plates about [] across at their maximum widths and about [] thick connected by two or more rods (inset sketch on Figure 4). The top of each end plate is flat and about [] wide. In addition, two fittings, each at least [] meter long, project from the exterior face of one plate. Similar fittings, which would increase the overall length of the probable simulator, are probably attached to the end of the other plate but could not be seen because of image obliquity. Reanalysis of a previously reported probable SS-X-24 canister extension, observed in the East Support Facility on [] Figure 5) indicates that it was also about [] in diameter but about [] long. This probable canister extension initially had been reported as being about [] meters long and [] in diameter. It should be noted, however, that a missile canister for the SS-X-24 still has not been identified. (TSR)

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SS-X-24 Payload Diameter

5. An SS-X-24 probable payload simulator, which resembles the SS-18 Mod-2 payload simulator, was at the [] (Figure 6). This probable payload simulator is about [] in diameter, indicating that the SS-X-24 payload is about [] in diameter, and about [] tall. The probable simulator consists of a cylinder with a band about [] from the base and a cylindrical object on the top. There are two fittings, or possibly four fittings at 90-degree intervals, on the top of the probable simulator. The top surface of the probable simulator is depressed, and a probably circular position or plate is visible in the depression. The circular plate may be for the attachment of an additional cylindrical piece to the probable simulator (like the one on the SS-18 Mod-2 payload simulator), which could increase its overall height. (TSR)

Miscellaneous Payload-Related Components

6. Two additional SS-X-24 probable payload-related components—a probable payload

component shipping canister and a probable payload-related crate—also were identified on [] (Figure 6). The component canister is about [] meters long and about [] in diameter. The crate has a chamfered roof and an overall length, width, and height of about [] and over [] respectively (image obliquity and shadows precluded an accurate determination of height). The chamfered roof is about [] wide, and two rectangular projections on the roof, each about a quarter of the way in from the ends, may serve as attachment points for a crane. The components shipped in the canister and crate have not been identified. (TSR)

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Analyst's Comments

SS-X-24 Airframe Diameter

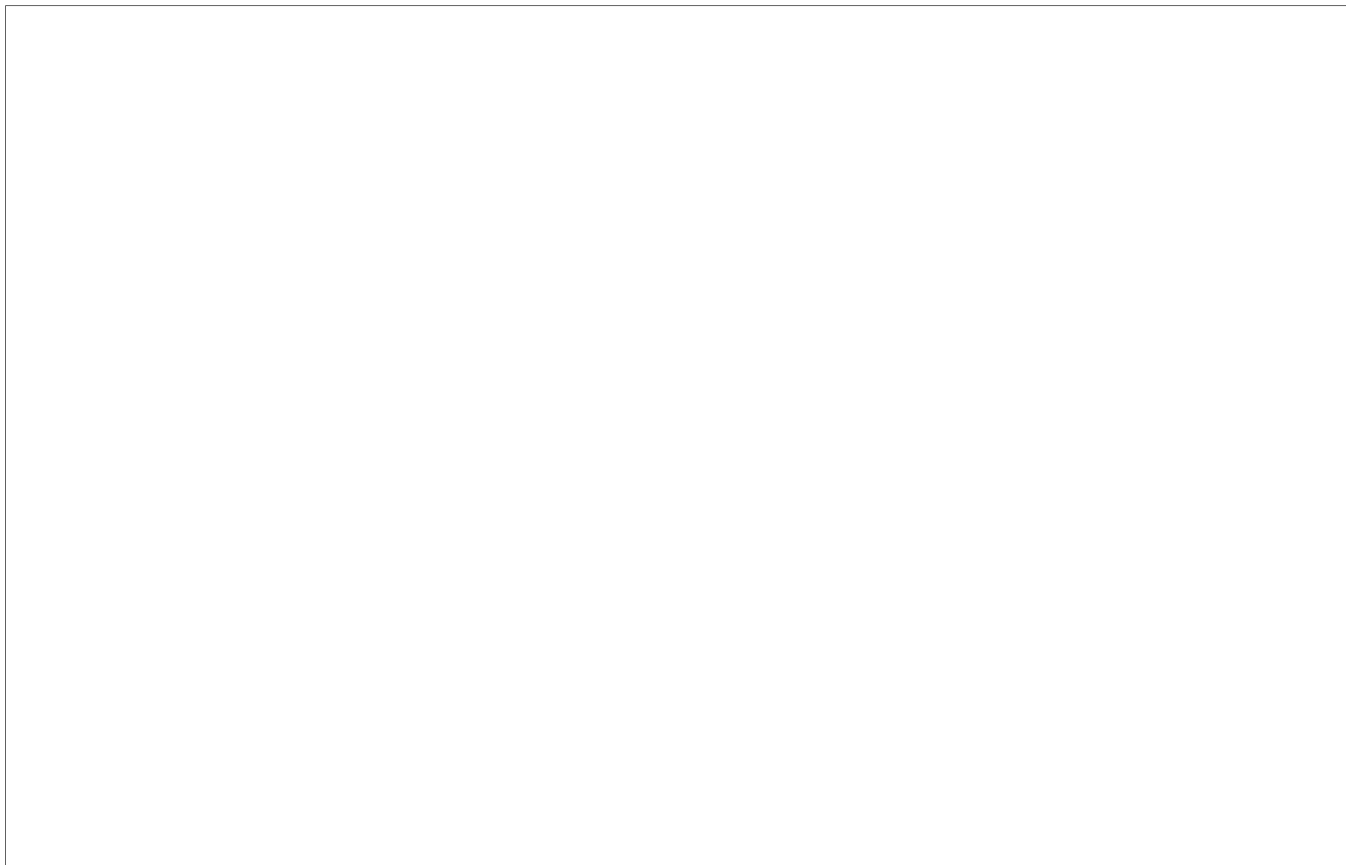
7. Using the dimensional similarities of training components and the operational components they represent, as well as previous estimates of airframe diameters based on missile canister diameters, a diameter for the SS-X-24 airframe can be estimated. The diameter of the probable SS-X-24 payload simulator is about []. Therefore, the base diameter of the shroud that would en-

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close a payload about this size would probably be about [redacted] This suggests that the diameter of the SS-X-24 airframe is probably about [redacted] ters. This conclusion is further supported by a comparison of the recently derived SS-X-24 data with data associated with the SS-18. The SS-18

airframe is estimated to be [redacted] in diameter and the SS-18 missile canister about [redacted] in diameter, a difference of about [redacted] Subtracting [redacted] from the assessed [redacted] diameter SS-X-24 canister would also result in an airframe diameter of about [redacted] (TSR)

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REFERENCE**IMAGERY**

All relevant satellite imagery acquired from May 1977 through [redacted] was used in the preparation of this report. (S/WN)

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Comments and queries regarding this report are welcome. They may be directed to [redacted] Soviet Missile and Space Division, Imagery Exploitation Group, NPIC, [redacted]

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